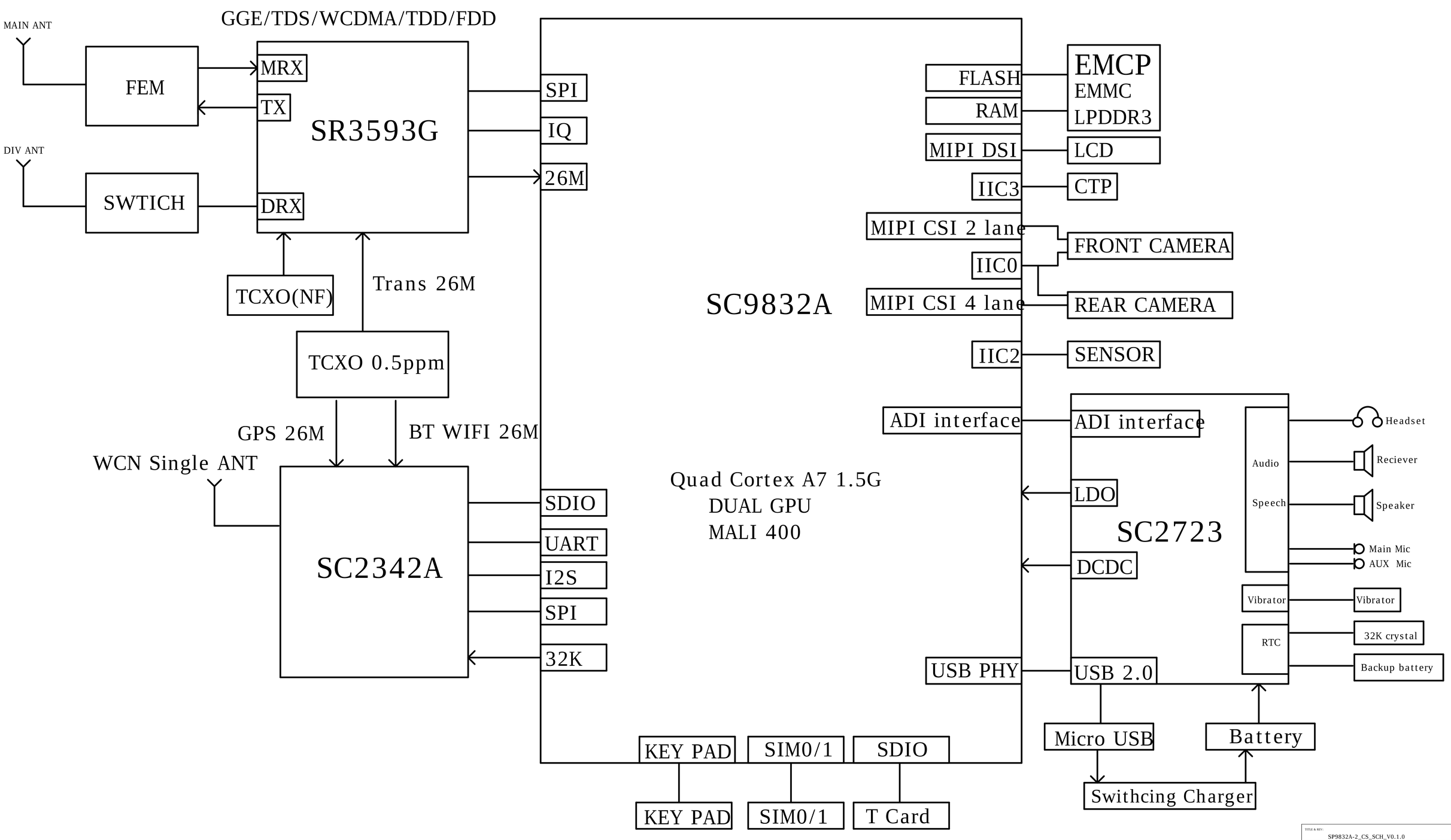
BLOCK DIAGRAM



REVISION RECORD:			
LTR	ECO NO:	APPROVED:	DATE:

TITLE & REV:	SP9832A-2_CS_SCH_V0.1.0		
DOCUMENT NO.:			
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 1 OF 23

REVISION RECORD			
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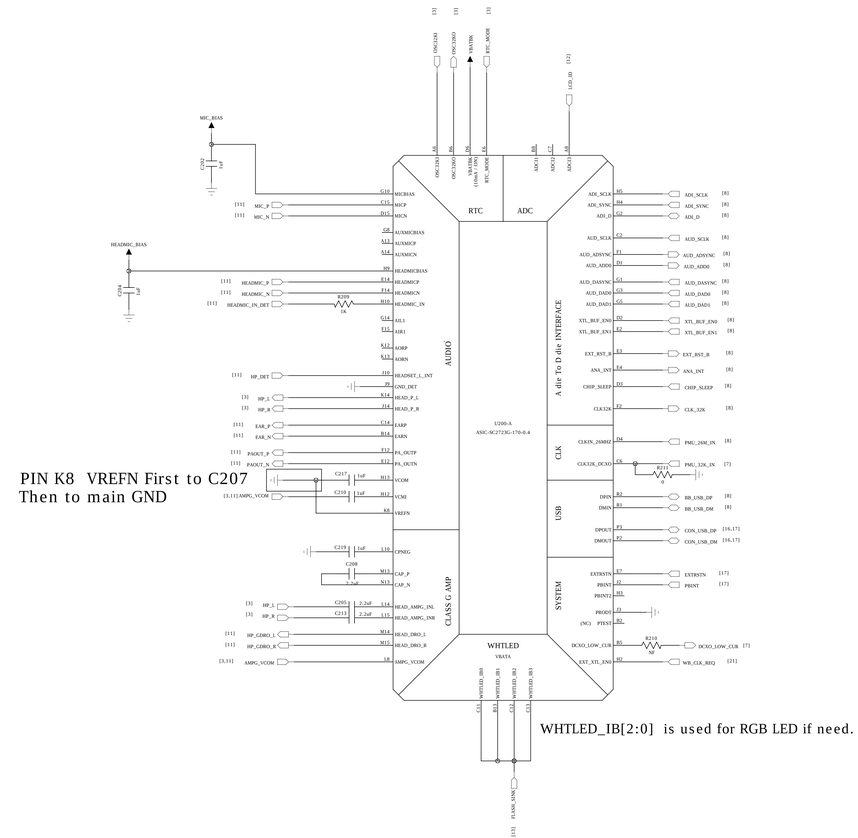
GPIO Configuration For SP9832A-2_CS_SCH_V0.1.0

GPIO_1	SPI_DATA_RF0	GPIO_41	NC	GPIO_81	NC	GPIO_121	GPS_GPIO0	GPIO_161	SIM1_DA
GPIO_2	SPI_CLK_RF0	GPIO_42	CAM_MCLK	GPIO_82	MTCK	GPIO_122	WBI_RST	GPIO_162	SIM1_RST
GPIO_3	SPI_LE_RF0	GPIO_43	NC	GPIO_83	MTMS	GPIO_123	LCD_ID		
GPIO_4	NC	GPIO_44	CAM_RST0	GPIO_84	NC	GPIO_124	KEYIN0		
GPIO_5	NC	GPIO_45	CAM_RST1	GPIO_85	NC	GPIO_125	KEYIN1		
GPIO_6	NC	GPIO_46	CAM_PWDN0	GPIO_86	NC	GPIO_126	USBID_CTRL		
GPIO_7	RFCTL_15	GPIO_47	CAM_PWDN1	GPIO_87	NC	GPIO_127	I2C2_SCL		
GPIO_8	RFCTL_16	GPIO_48	I2C0_SCL	GPIO_88	NC	GPIO_128	I2C2_SDA		
GPIO_9	RFCTL_17	GPIO_49	I2C0_SDA	GPIO_89	NC	GPIO_129	CON_32K_IN		
GPIO_10	RFCTL_18	GPIO_50	LCM_RSTN	GPIO_90	NC	GPIO_130	GPS_PDN		
GPIO_11	RFCTL_19	GPIO_51	LCM_FMARK	GPIO_91	I2C1_SDA	GPIO_131	CHG_PD		
GPIO_12	RFCTL_20	GPIO_52	NC	GPIO_92	CHG_EN	GPIO_132	BT_WAKE_HOST		
GPIO_13	RFCTL_21	GPIO_53	NC	GPIO_93	I2C1_SCL	GPIO_133	BT_HOST_WAKE		
GPIO_14	RFCTL_22	GPIO_54	NC	GPIO_94	WF_COEXIST	GPIO_134	BOARD_ID0		
GPIO_15	RFCTL_23	GPIO_55	NC	GPIO_95	NC	GPIO_135	BOARD_ID1		
GPIO_16	RFCTL_24	GPIO_56	BT_PCM_OUT	GPIO_96	GPS_CLK_REQ	GPIO_136	NC		
GPIO_17	RFCTL_25	GPIO_57	BT_PCM_IN	GPIO_97	WF_WAKE_HOST	GPIO_137	NC		
GPIO_18	WCN_LTECOEXIST_RX	GPIO_58	BT_PCM_CLK	GPIO_98	EMMC_D0	GPIO_138	LCM_BL_PWM		
GPIO_19	RFCTL_0	GPIO_59	BT_PCM_SYNC	GPIO_99	EMMC_CMD	GPIO_139	G_INT		
GPIO_20	RFCTL_1	GPIO_60	BT_U0RXD	GPIO_100	EMMC_D6	GPIO_140	PROX_INT		
GPIO_21	RFCTL_2	GPIO_61	BT_U0TXD	GPIO_101	EMMC_D7	GPIO_141	TF_DET		
GPIO_22	RFCTL_3	GPIO_62	BT_U0RTS	GPIO_102	EMMC_CLK	GPIO_142	CAMERA_FLASH_EN		
GPIO_23	RFCTL_4	GPIO_63	BT_U0CTS	GPIO_103	EMMC_D5	GPIO_143	CAMERA_TORCH_EN		
GPIO_24	RFCTL_5	GPIO_64	WF_SD1_CLK	GPIO_104	EMMC_D4	GPIO_144	CTP_INT		
GPIO_25	RFCTL_6	GPIO_65	WF_SD1_CMD	GPIO_105	NC	GPIO_145	CTP_RST		
GPIO_26	RFCTL_7	GPIO_66	WF_SD1_D0	GPIO_106	EMMC_D3	GPIO_146	I2C3_SCL		
GPIO_27	RFCTL_8	GPIO_67	WF_SD1_D1	GPIO_107	EMMC_RST	GPIO_147	I2C3_SDA		
GPIO_28	RFCTL_9	GPIO_68	WF_SD1_D2	GPIO_108	EMMC_D1	GPIO_148	TF_SD0_D3		
GPIO_29	RFCTL_10	GPIO_69	WF_SD1_D3	GPIO_109	EMMC_D2	GPIO_149	TF_SD0_D2		
GPIO_30	RFCTL_11	GPIO_70	BB_U1TXD	GPIO_110	NC	GPIO_150	TF_SD0_CMD		
GPIO_31	RFCTL_12	GPIO_71	BB_U1RXD	GPIO_111	NC	GPIO_151	TF_SD0_D0		
GPIO_32	RFCTL_13	GPIO_72	NC	GPIO_112	NC	GPIO_152	TF_SD0_D1		
GPIO_33	RFCTL_14	GPIO_73	NC	GPIO_113	NC	GPIO_153	TF_SD0_CLK0		
GPIO_34	WCN_LTECOEXIST_TX	GPIO_74	GPS_U0RXD	GPIO_114	NC	GPIO_154	NC		
GPIO_35	NC	GPIO_75	GPS_U0TXD	GPIO_115	NC	GPIO_155	NC		
GPIO_36	RFFE_SCLK0	GPIO_76	GPS_U0RTS	GPIO_116	NC	GPIO_156	NC		
GPIO_37	RFFE_SDA0	GPIO_77	GPS_U0CTS	GPIO_117	NC	GPIO_157	SIM0_CLK		
GPIO_38	NC	GPIO_78	BB_U4TXD	GPIO_118	NC	GPIO_158	SIM0_DA		
GPIO_39	NC	GPIO_79	BB_U4RXD	GPIO_119	NC	GPIO_159	SIM0_RST		
GPIO_40	CAM_AFPWDN	GPIO_80	NC	GPIO_120	NC	GPIO_160	SIM1_CLK		

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APPROVED: Gang.Xu	DATE(D): 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 3 OF 23

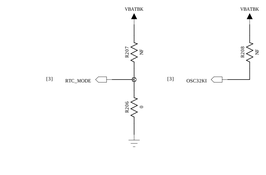
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PMU_ANALOG

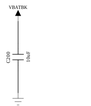


PIN K8 VREFN First to C207
Then to main GND

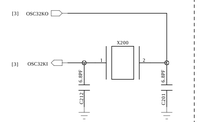
WHTLED_IB[2:0] is used for RGB LED if need.



BKBT



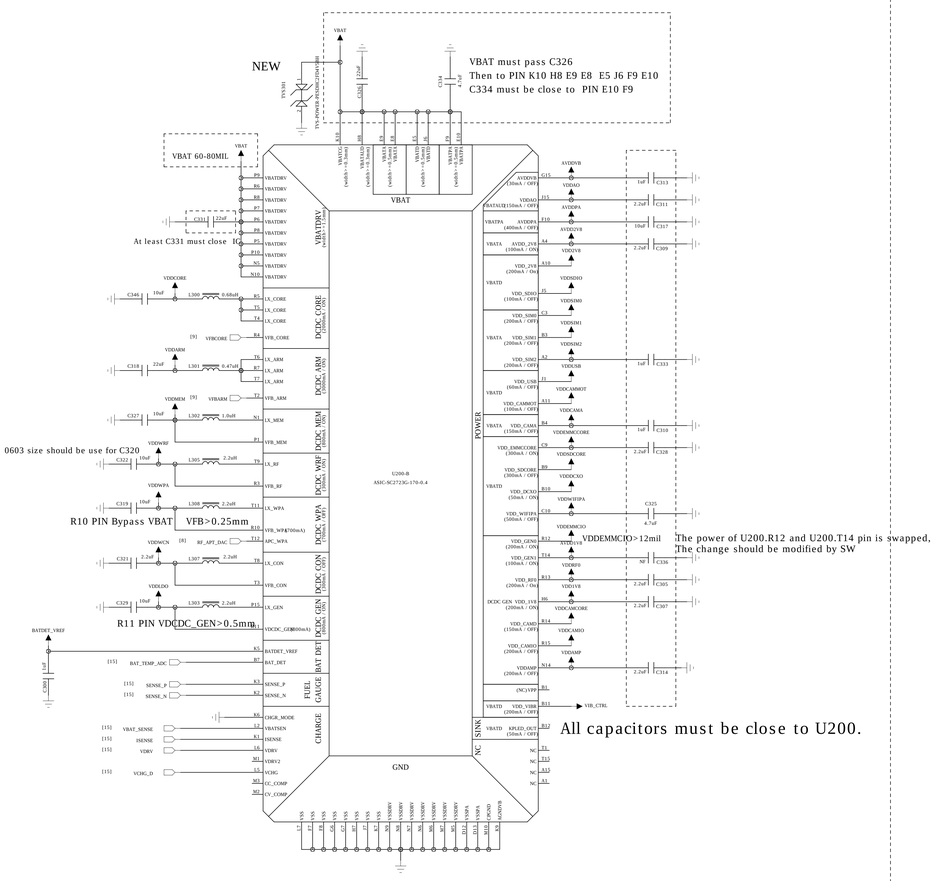
RTC



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		DOCUMENT NO.:	
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT:	Hardware DEPT.
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PMU_POWER



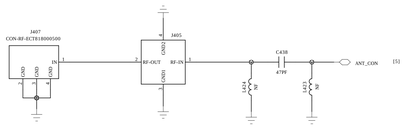
SC2723 LDO ouput

Power	Output Voltage (V)	Output Current	Default Voltage	Default
VDD1V8	1.2~1.8	200mA	1.8V	ON
AVDD28	1.8~3.3	100mA	2.8V	ON
VDD2V8	1.8~3.3	200mA	2.8V	ON
VDDSIM0	1.8~3.3	200mA		OFF
VDDSIM1	1.8~3.3	200mA		OFF
VDDSIM2	1.8~3.3	200mA		OFF
VDDRF0	1.2~1.8	200mA	1.8V	ON
VDDCAMA	1.8~3.3	150mA		OFF
VDDCAMMOT	1.8~3.3	100mA		OFF
VDDEMMCCORE	1.8~3.3	300mA	3.0V	ON
VDDSDCORE	1.8~3.3	300mA		OFF
VDDSDIO	1.8~3.3	100mA		OFF
VBATBK	2.6/2.8/3.0/3.2	10mA	2.8V	ON
VDDVIB	1.8~3.3	200mA		OFF
KPLED_OUT	1.8~3.3	50mA		OFF
VDD_WIFIPA	1.8~3.3	500mA		OFF
VDD_DCXO	1.8~3.3	50mA	1.8V	ON
VDDCAMD	1.2~1.8	150mA		OFF
VDDUSB	1.8~3.3	60mA	3.3V	OFF
VDDAO	2.9/3.1/3.2/3.3	150mA		OFF
AVDDVB	2.9/3.1/3.2/3.3	30mA		OFF
AVDDPA	2.9/3.1/3.2/3.3	400mA		OFF
VDDCAMIO	1.2~1.8	200mA		OFF
AVDDAMP	1.2~1.8	200mA		OFF
VDDGEN0	1.2~1.8	200mA	1.8V	ON
VDDGEN1	1.2~1.8	100mA	1.8V	ON
DCDCARM	0.6~3.7	3000mA	0.9V	ON
DCDCCORE	0.6~3.7	2000mA	0.9V	ON
DCDCMEM	0.6~3.7	800mA	1.2V	ON
DCDC_GEN	0.6~3.7	800mA	2.2V	ON
DCDCRF	0.6~3.7	300mA	1.5V	ON
DCDCWPA	0.6~3.7	700mA		OFF
DCDCCON	0.6~3.7	300mA		OFF

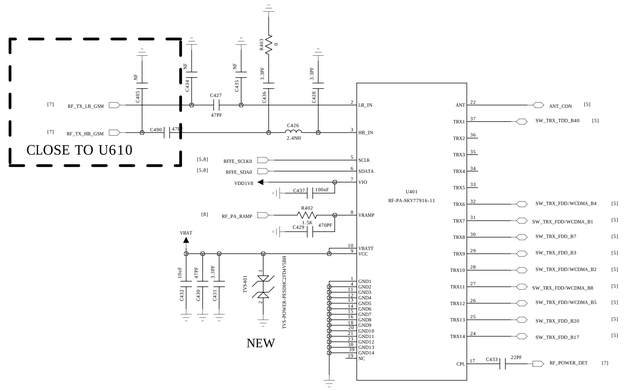
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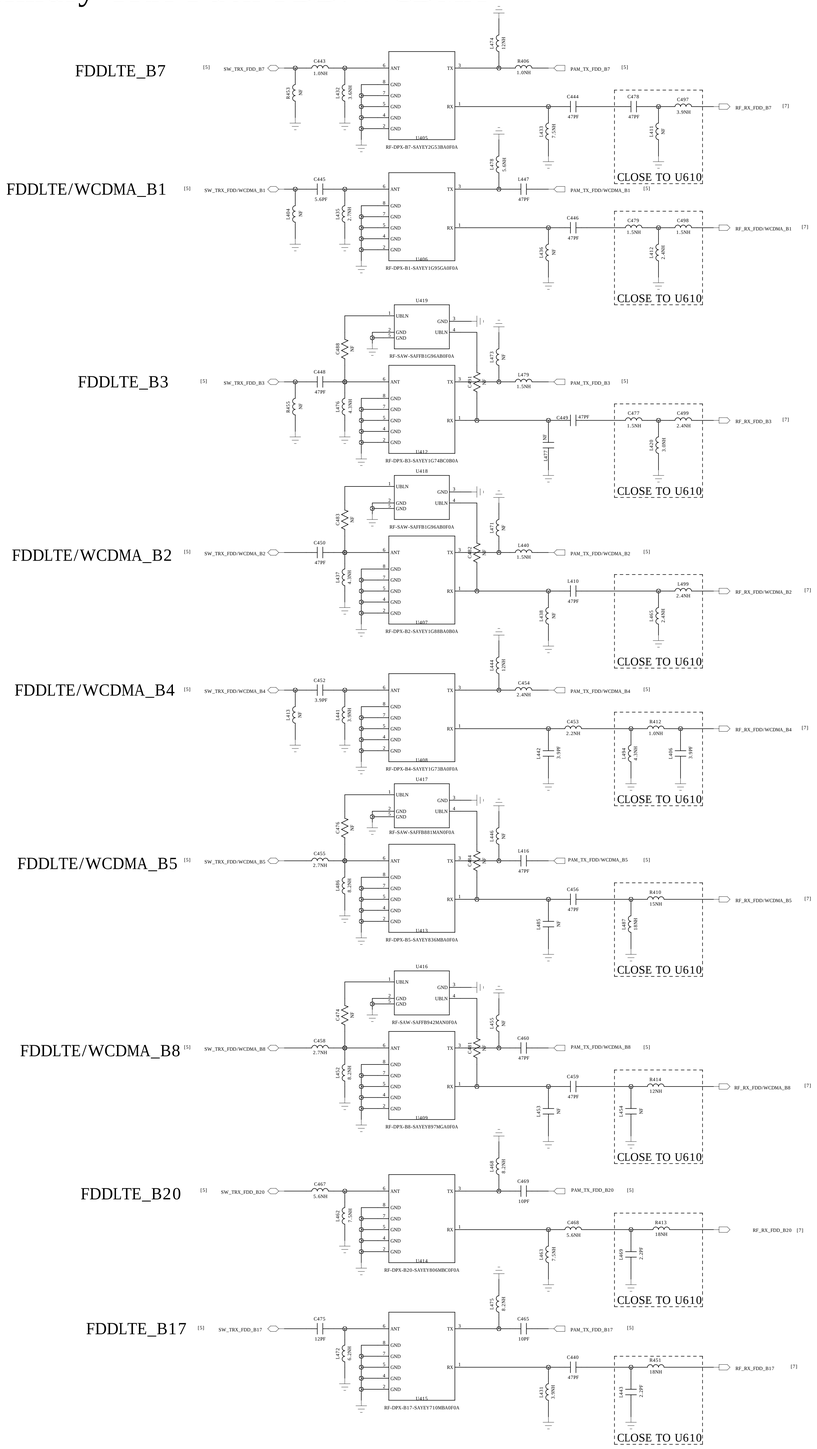
Primary Antenna



TDD B39/TD/GSM PA + Switch

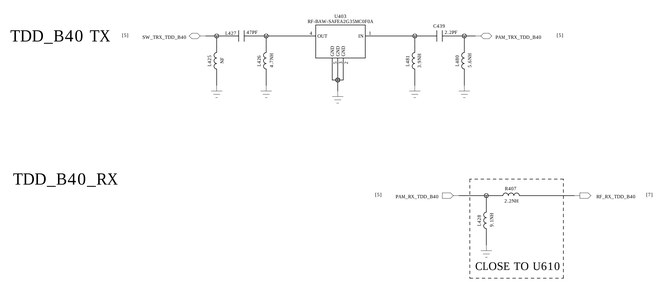


Primary TRX Path FDD/WCDMA

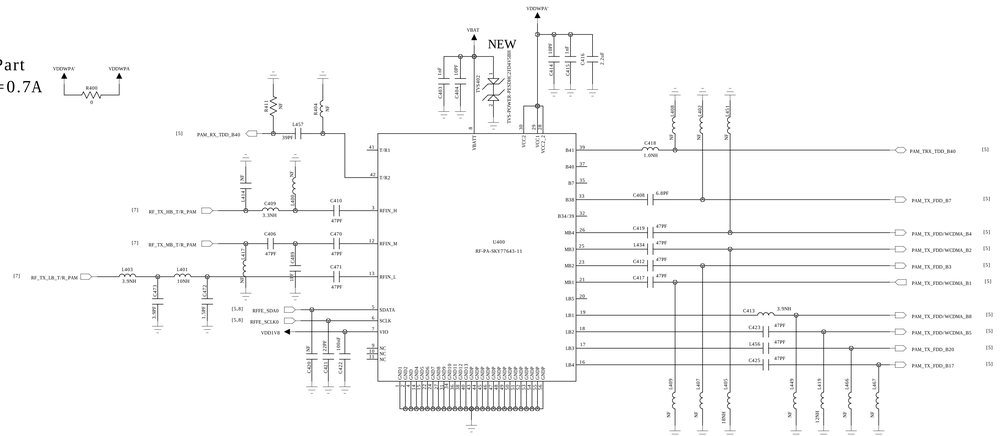


Primary RX Path GSM

Primary TRX Path TDD



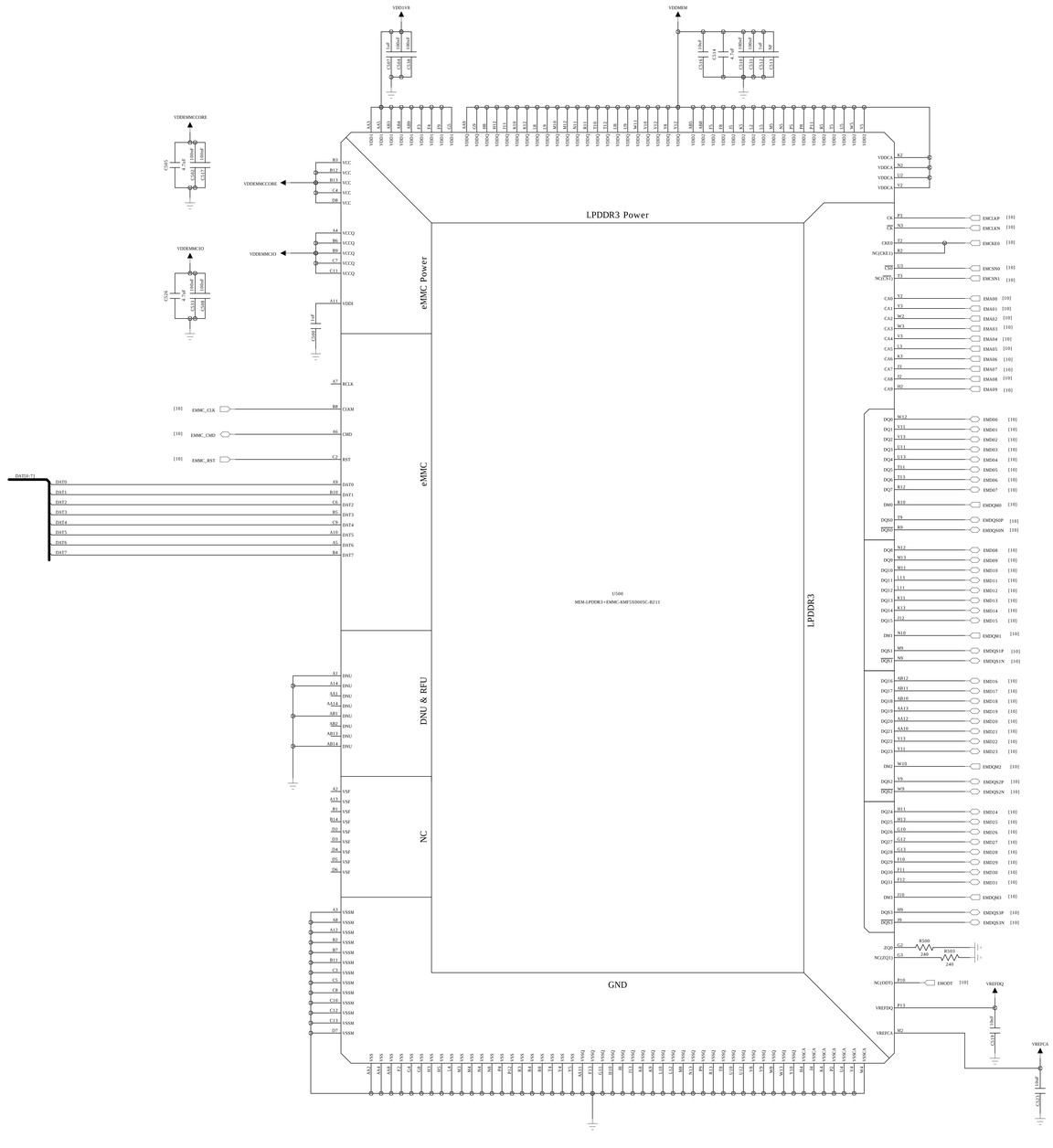
LTE/WCDMA PAM



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eMMC+LPDDR3

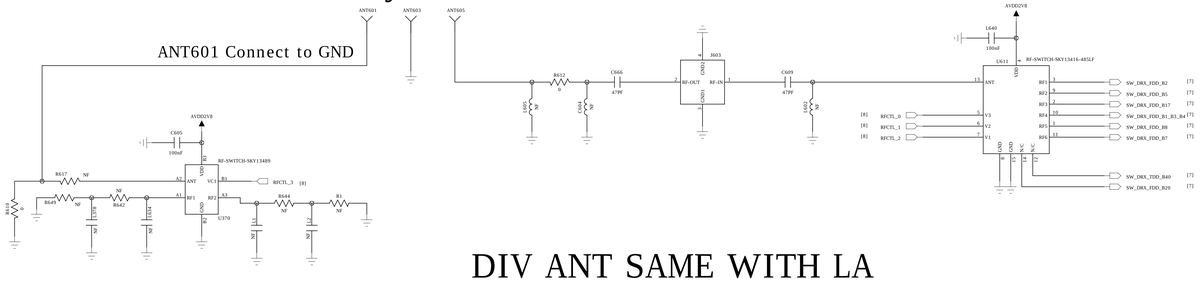
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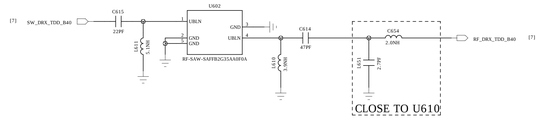
Diversity LTE Path



DIV ANT SAME WITH LA

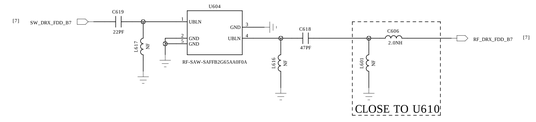
Diversity TDDLTE RX Path

TDD_B40_Diversity RX path

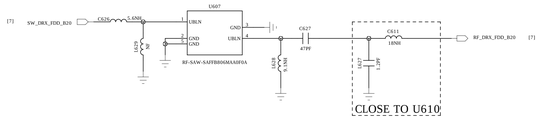


Diversity FDDLTE RX Path

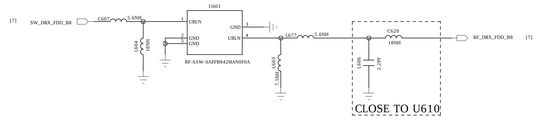
FDD_B7_Diversity Rx path



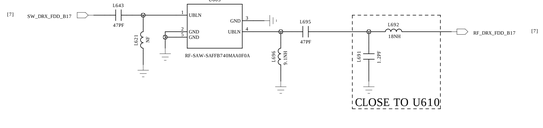
FDD_B20_Diversity Rx path



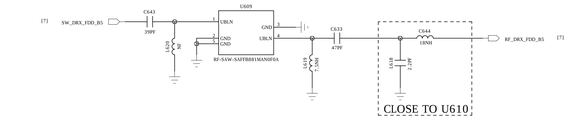
FDD_B8_Diversity Rx path



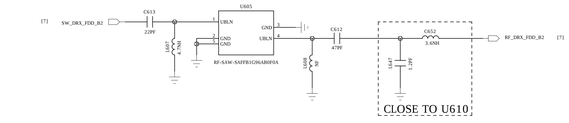
FDD_B17_Diversity Rx path



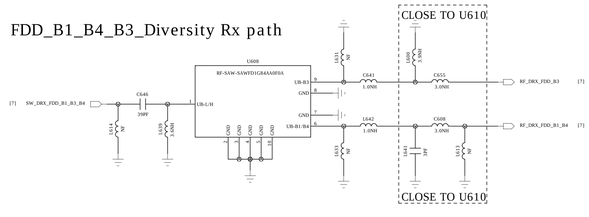
FDD_B5_Diversity Rx path



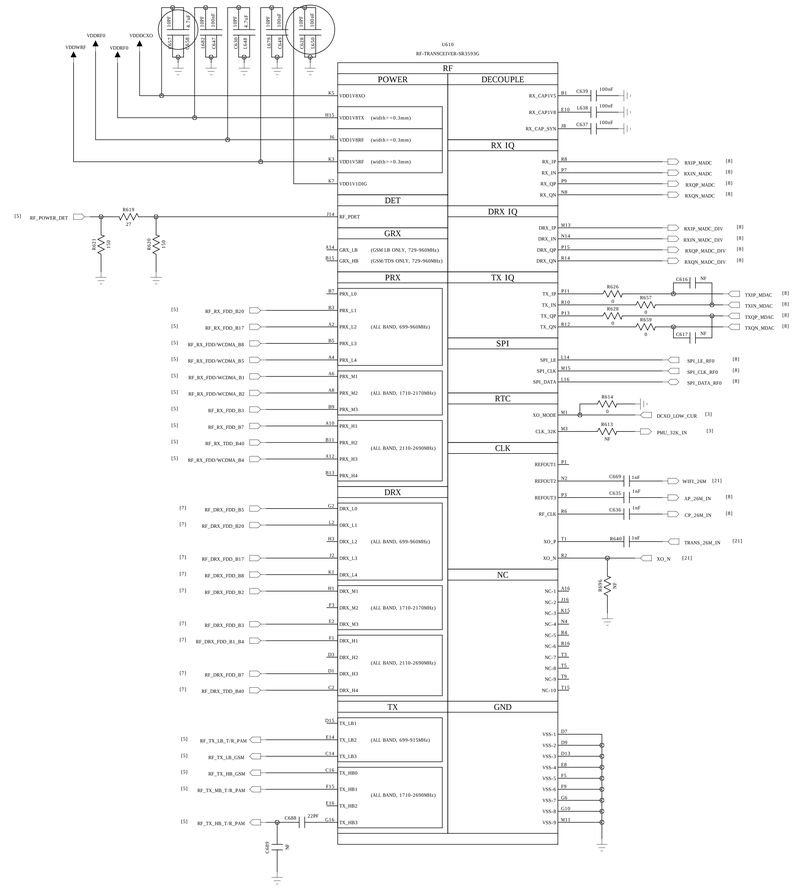
FDD_B2_Diversity TRx path



FDD_B1_B4_B3_Diversity Rx path



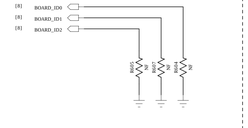
TRANSCEIVER



Dual TCXO/VCTCXO+TCXO/Share TCXO

	26M Configuration	X0600	Y7200	C0600	C0636	C0635	C0632	C7218	C7216	C7232	C7222	R0640	R0600	R0602	C0601	R7202	R7203
	Dual TCXO	TCXO	TCXO	1000pF	1000pF	1000pF	0ohm	NF	1000pF	NF	1000pF	NF	NF	0 ohm	10pF	NF	0 ohm
	VCTCXO+TCXO	VCTCXO	TCXO	1000pF	1000pF	1000pF	0ohm	NF	1000pF	NF	1000pF	NF	0 ohm	NF	10pF	NF	0 ohm
Defualt	Share TCXO	NF	TCXO	NF	1000pF	1000pF	NF	1000pF	NF	1000pF	1000pF	0 ohm	NF	0 ohm	NF	0 ohm	NF

Band info

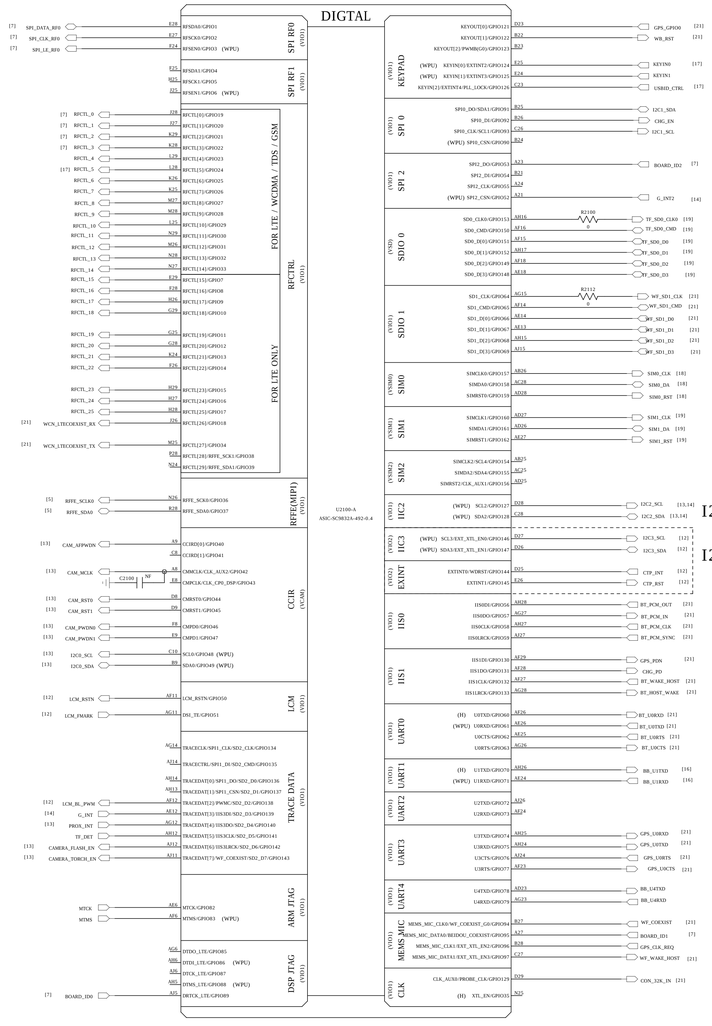


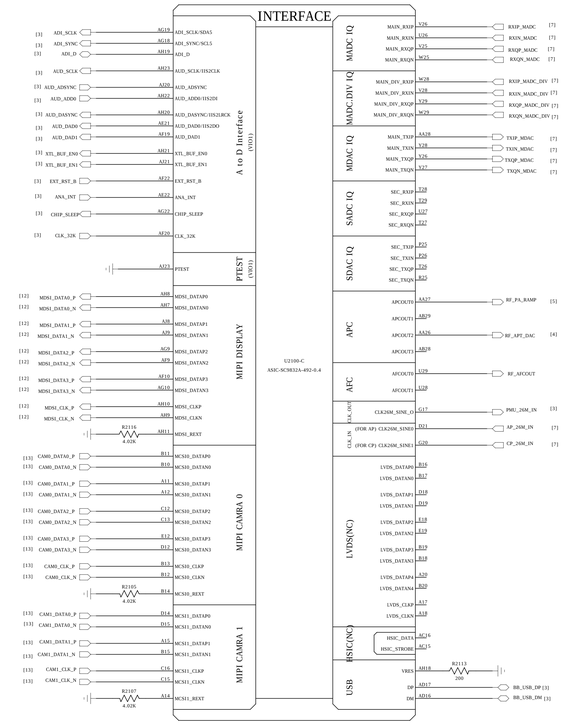
ADC/GPIO	00	01	10	11
0	reserved	reserved	reserved	reserved
1	reserved	reserved	reserved	reserved
2	reserved	reserved	reserved	reserved
3	reserved	reserved	reserved	reserved

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APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 9 OF 23

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DIGITAL





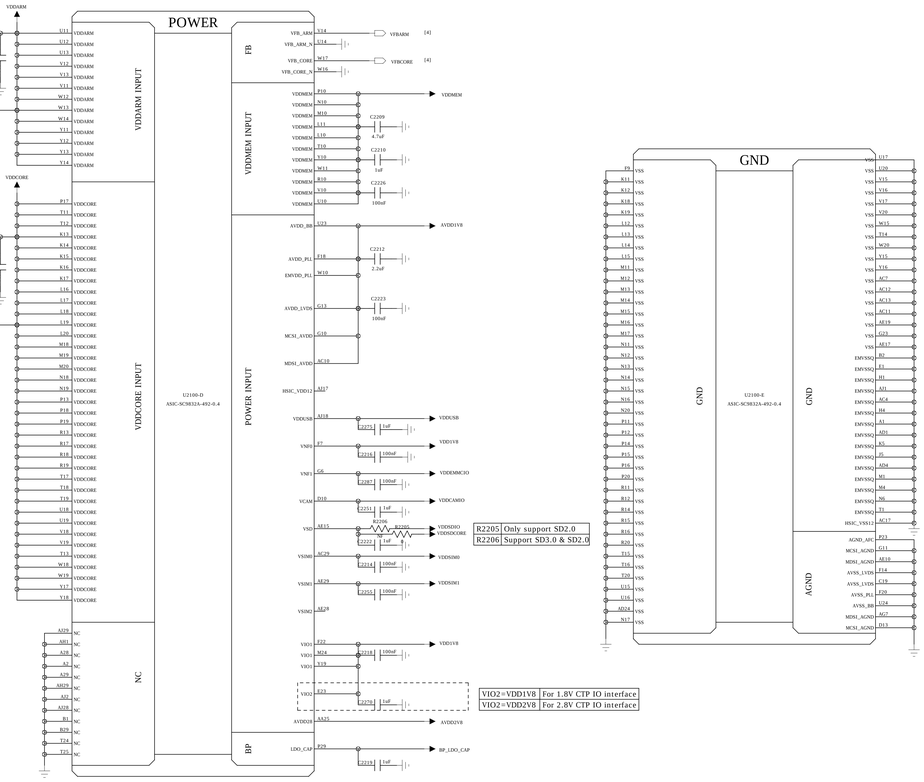
I2C2: G Sensor, M Sensor, L+P Sensor, Gyroscope

I2C3: CTP

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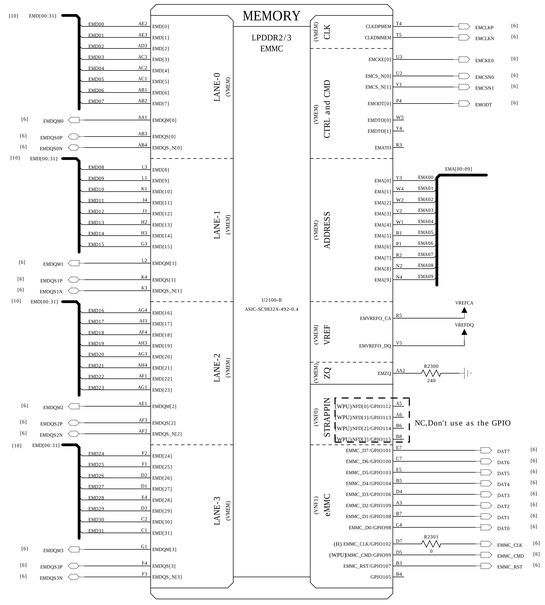
POWER



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River.Du	2015-10-12	DOCUMENT NO.:	
EQA: Mulder.Han	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
APPROVED: Gang.Xu	DATED: 2015-10-12	COMPANY:	
		CONFIDENTIAL AND PROPRIETARY	SHEET: 11 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

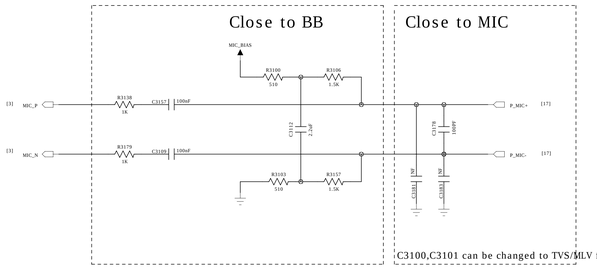
MEMORY



TITLE & REV:	SP9832A-2_CS_SCH_V0.1.0		
DOCUMENT NO.:			
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 12 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

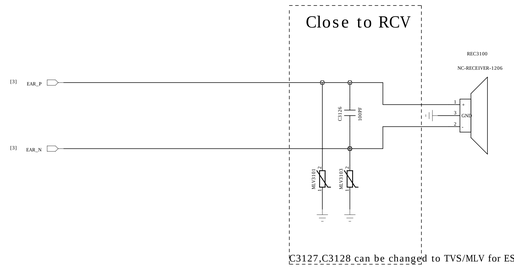
MAIN MIC



C3100,C3101 can be changed to TVS/MLV for ESD issue.

1Kohm is reserved for improving ESD protection.

RECEIVER



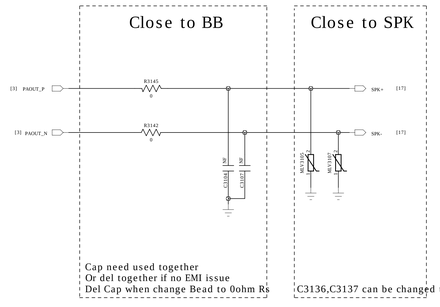
C3127,C3128 can be changed to TVS/MLV for ESD issue.

AUX MIC

C3105,C3106 can be changed to TVS/MLV for ESD issue.

1Kohm is reserved for improving ESD protection.
Suggest use dual-mic solution for CMCC new test case.improving the background noise suppression

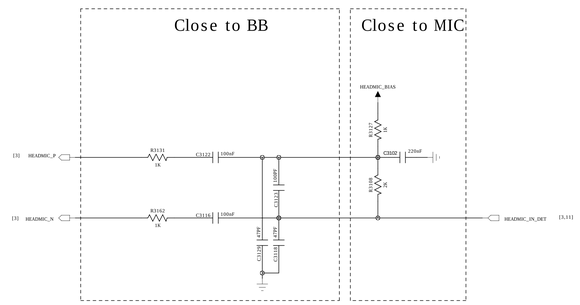
SPEAKER



Cap need used together
Or del together if no EMI issue
Del Cap when change Bead to 0ohm Rs

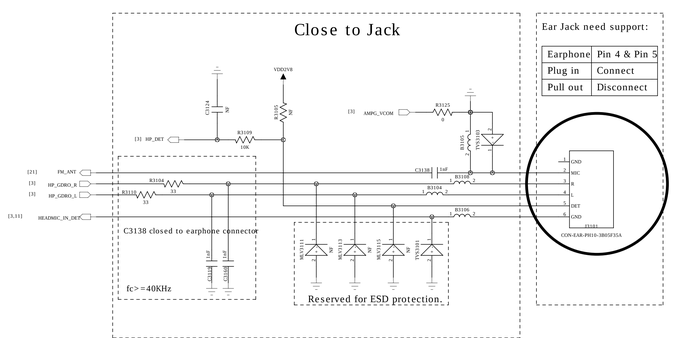
C3136,C3137 can be changed to TVS/MLV for ESD issue.

HEAD MIC



1Kohm is reserved for improving ESD protection.
Note:C3122 C3166 use 1uF Cap

3.5mm Headphone Jack



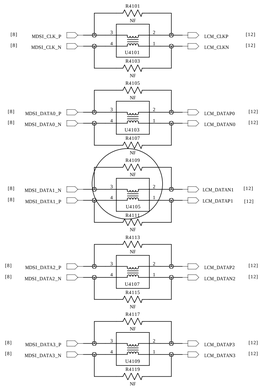
Ear Jack need support:

Earphone	Pin 4 & Pin 5
Plug in	Connect
Pull out	Disconnect

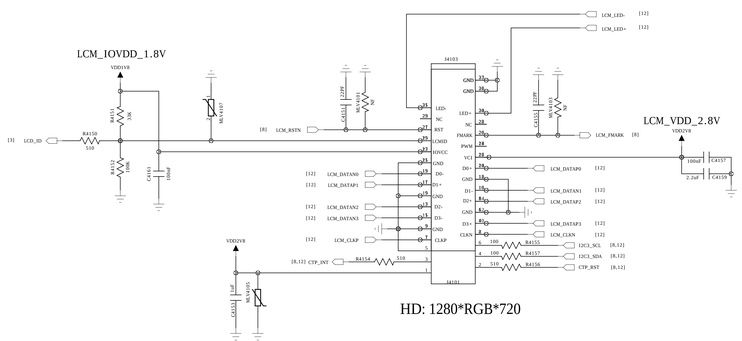
TITLE & REV: SP9832A-2_CS_SCH_V0.1.0			
DOCUMENT NO.:			
DESIGNED: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 13 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

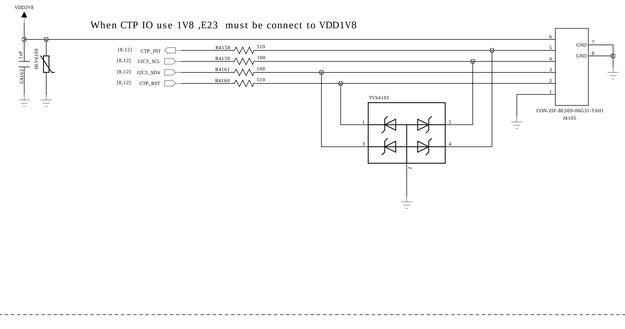
5" LCM(MIPI)



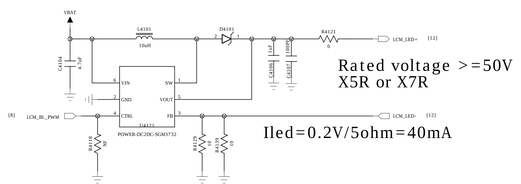
Pin No.	LCM
1	LED+
2	NC
3	LED-
4	VDD1V8
5	VDD2V8
6	LCD_ID
7	LCM_FMARK
8	LCM_RSTN
9	GND
10	NC
11	NC
12	GND
13	NC
14	NC
15	GND
16	DSI_CLK_P
17	DSI_CLK_N
18	GND
19	DSI_DATA1_P
20	DSI_DATA1_N
21	GND
22	DSI_DATA0_P
23	DSI_DATA0_N
24	GND
25	GND



5" COF CTP



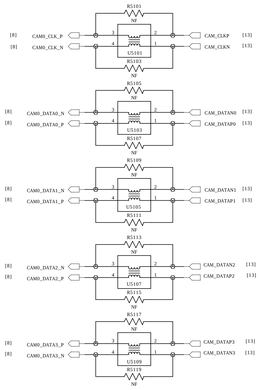
Back Light Driver for 2 line 10 LEDs In Series

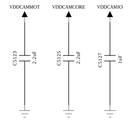


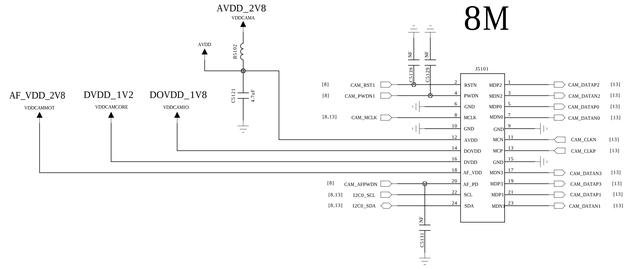
DESIGNER: River.Du	DATED: 2015-10-12	TITLE & REV: SP9832A-2_CS_SCH_V0.1.0	
EQA: Mulder.Han	DATED: 2015-10-12	DOCUMENT NO.:	
APPROVED: Gang.Xu	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
		COMPANY:	
		CONFIDENTIAL AND PROPRIETARY	SHEET: 14 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

8M Sensor

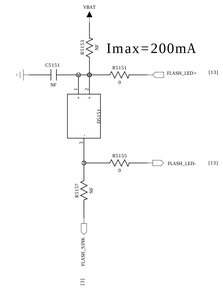




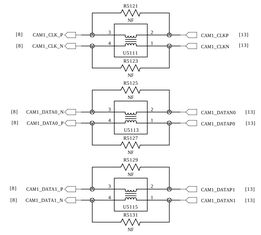


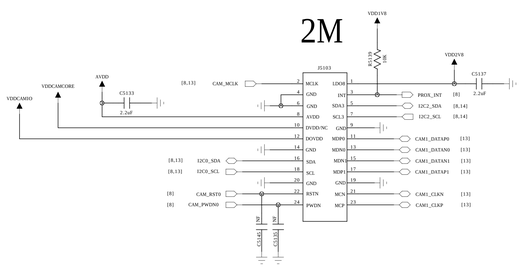
The camera Analog GND need connect wuth Main GND directly

FLASH LED

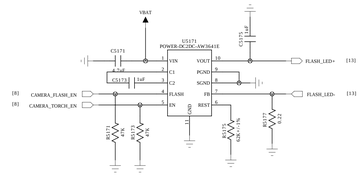


2M Sensor and L/P sensor





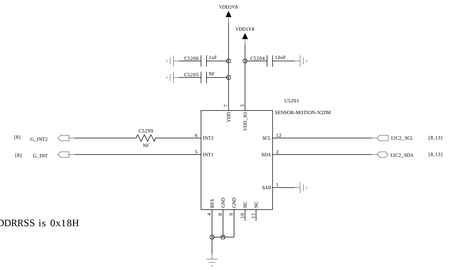
Flash LED Driver



		TITLE & REV:	SP9832A-2_CS_SCH_V0.1.0
		DOCUMENT NO.:	
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT:	Hardware DEPT.
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 15 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

G Sensor



CS=1: IIC

LIS3DH : SA0=0: IIC ADDRRSS is 0x18H

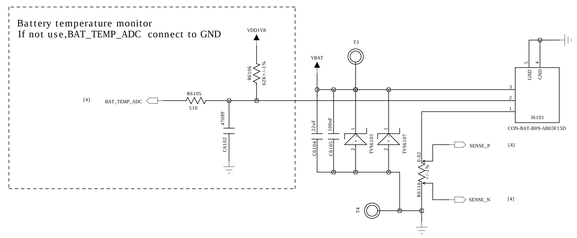
NEW

Ambient Light Sensor with Proximity Sensor

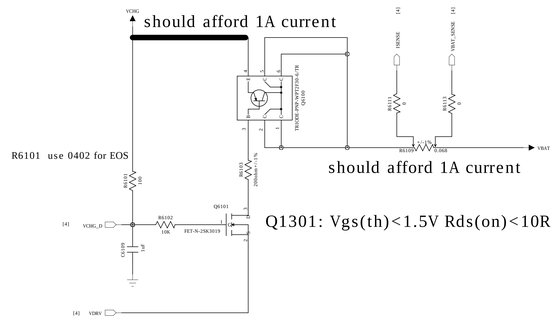
		TITLE & REV: SP9832A-2_CS_SCH_V0.1.0	
		DOCUMENT NO.:	
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 16 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

BATTERY



USB CHARGE



DESIGNER: River.Du	DATED: 2015-10-12	TITLE & REV: SP9832A-2_CS_SCH_V0.1.0	
		DOCUMENT NO.:	
EQA: Mulder.Han	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
APPROVED: Gang.Xu	DATED: 2015-10-12	COMPANY:	
		CONFIDENTIAL AND PROPRIETARY	SHEET: 17 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

7pin Micro USB

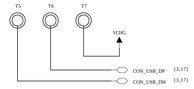
USB BOOT CONTROL

NBOOT = Float----->NAND BOOT

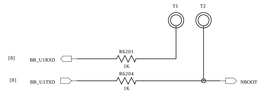
NBOOT = 0 ----->USB BOOT

PBINT2 is only for auto power on.

If ESD test FAILURE, Put on the MLVs and TVSs



Test Points



MARK POINT

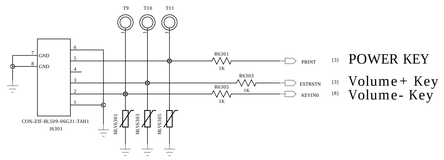


ARM JTAG

UART POINT

TITLE & REV.:	SP9832A-2_CS_SCH_V0.1.0		
DOCUMENT NO.:			
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 18 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

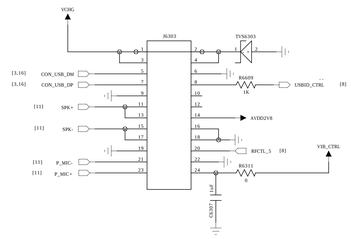


POWER KEY
Volume+ Key
Volume- Key

Press KEYIN0+GND when power up
will make the phone boot from USB

If ESD test FAILURE, Put on the MLVs

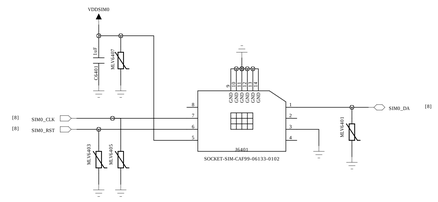
KEYPAD FPC



RGB LED

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

SIM0

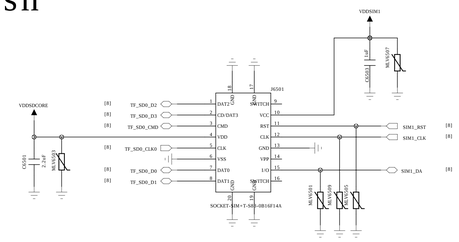


If ESD test FAILURE, Put on the MLVs and TVSs

DESIGNER: River.Du	DATED: 2015-10-12	TITLE & REV: SP9832A-2_CS_SCH_V0.1.0	
EQA: Mulder.Han	DATED: 2015-10-12	DOCUMENT NO.:	
APPROVED: Gang.Xu	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
		COMPANY:	
		CONFIDENTIAL AND PROPRIETARY	SHEET: 20 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

SIM1+T Flash



TITLE & REV: SP9832A-2_CS_SCH_V0.1.0			
DOCUMENT NO.:			
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 21 OF 23

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

VIBRATOR

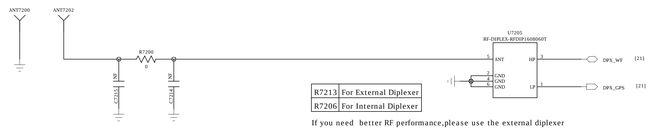
Reserved(0402)for RF desense consideration

should afford 200mA current

TITLE & REV: SP9832A-2_CS_SCH_V0.1.0		
DOCUMENT NO.:		
DESIGNER: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:
APPROVED: Gang.Xu	DATED: 2015-10-12	
CONFIDENTIAL AND PROPRIETARY		SHEET: 22 OF 23

REVISION RECORD			
LTR	ECO NO.:	APPROVED:	DATE:

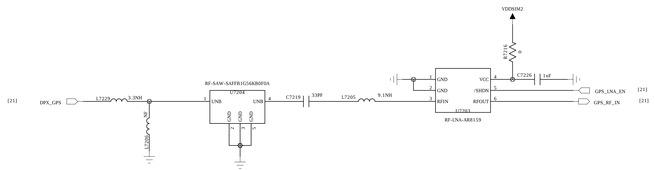
BT&WIFI&GPS ANT



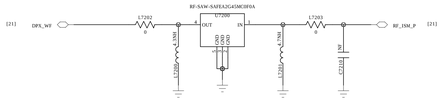
R7213	For External Diplexer
R7206	For Internal Diplexer

If you need better RF performance,please use the external diplexer

GPS SAW LNA



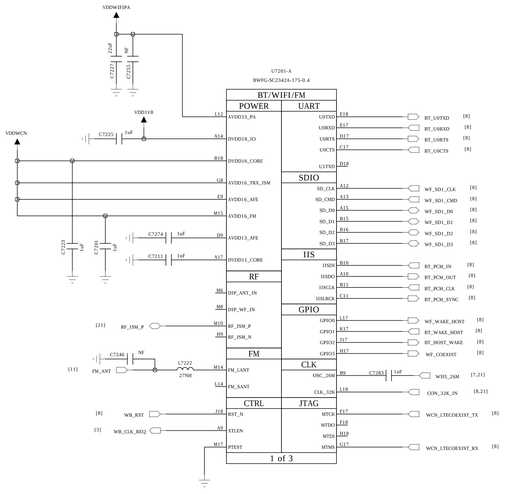
WIFI/BT SAW LNA



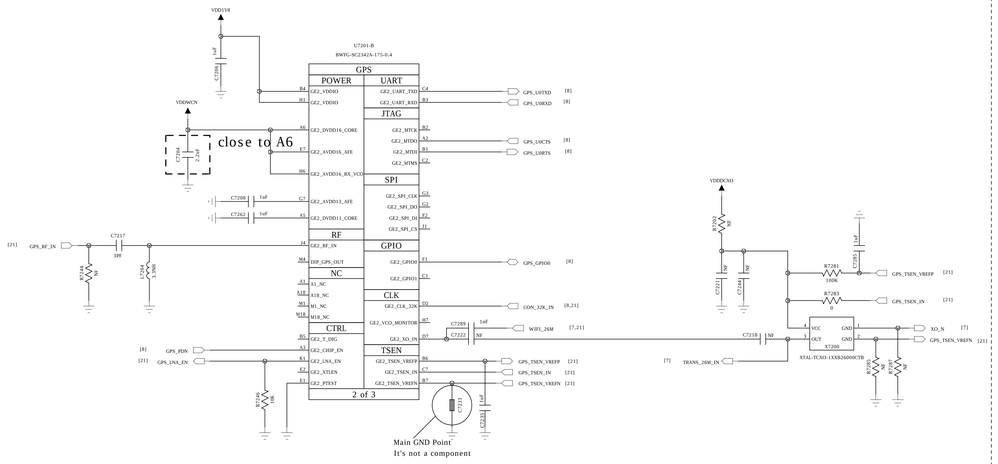
DPX selection

VALUE	R7213	R7206	R7224	R7223	R7253	R7252
External DPX	0ohm	NF	0ohm	NF	0ohm	NF
Internal DPX	NF	0ohm	NF	0ohm	NF	0ohm

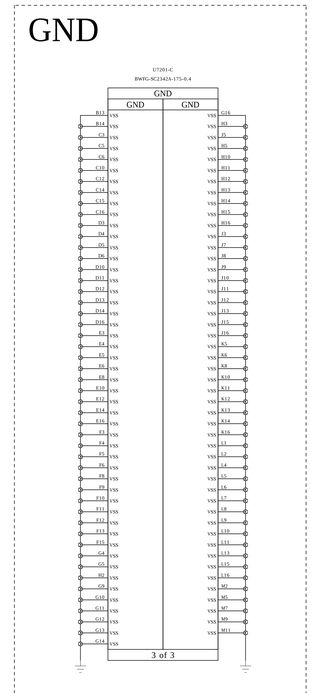
MARLIN



GE2



GND



TITLE & REV: SP9832A-2_CS_SCH_V0.1.0			
DOCUMENT NO.:			
DESIGNED: River.Du	DATED: 2015-10-12	DEPARTMENT: Hardware DEPT.	
EQA: Mulder.Han	DATED: 2015-10-12	COMPANY:	
APPROVED: Gang.Xu	DATED: 2015-10-12	CONFIDENTIAL AND PROPRIETARY	SHEET: 23 OF 23